

PATENT
Attorney Docket No.: 30051/38200

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir

In connection with the subject patent application, please enter the following amendment:

IN THE SPECIFICATION:

At page 1, after the title, please add a new centered heading as follows:

Field of the Invention

Page 1, after the first full paragraph, please add a new centered heading as follows:

Background of the Invention

Page 1, after the fourth full paragraph, please add a new centered heading as follows:

Summary of the Invention

At page 2, please delete the entire first paragraph.

At page 4, after the first full paragraph, please add a new centered heading as follows:

Brief Description of the Drawings

Page 4, after description of Figure 4, please add a new centered heading as follows:

Detailed Description of the Invention

Page 5, please delete the first full paragraph, and substitute with the following:

Reference numeral 12 denotes a feeder rotor with recesses 24 whose shape is adapted to the drinking straws or the drinking straws in protective coverings. Number 54 shows the vacuum holes which upon application of vacuum hold the drinking straws to the feeder rotor

12. The feeder rotor 12 is equipped with two peripheral grooves 56a and 56b. A further circular groove 58 is located between the two other circular grooves at a height corresponding to glue band 8. A knife 14, movable radially in relation to the axis of the feeder rotor 12, serves to sever the drinking straw band 6. At the point where the knife 14 meets the feeder rotor 12 in severing the drinking straw band 6, a narrow vertically extending groove can be provided in the rotor for receiving the knife, this groove not being shown in Figure 1 for reasons of visual clarity.

Page 5, please delete the second full paragraph, and substitute with the following:

Reference numerals 16a and 16b indicate pressing devices pivotally supported around an axis 19. Arrow direction 50 indicates in which direction the individual drinking straws are moved through the pressing devices 16a and 16b. The grooves 56b and 56a between the feeder rotor 12 have been chosen in regard to their dimensions such that the feeder rotor 12 can rotate without being obstructed by the pressing devices 16a and 16b which protrude into the grooves 56b and 56a.

IN THE CLAIMS:

Please delete Patent claims at top of page and insert We Claim.

Please amend the claims to read as follows:

1 (Amended). Drinking straw attachment device for attaching drinking straws to beverage containers, wherein the drinking straws (4) are fed in the form of a drinking straw band (6, 26) which has been provided on a first side with a glue layer (8), the drinking straw attachment device comprising:

a conveyer device (10) for transporting the beverage containers (2) along a conveyor belt;

a feeder device (12) for feeding the drinking straw band (6, 26) to the conveyor belt, wherein the drinking straw band engages a second side on the feeder device (12) which has not been provided with a glue layer;

a cutting device (14) in the area of the feeder device (12) for severing the drinking straw band (6, 26) between two drinking straws (4) each;

at least one pressing device (16a, 16b) for pressing a drinking straw (4) to a foil bag (2b) in such a manner that the drinking straw sticks with the glue layer (8) to the beverage container; and

the feeder device (12) at least at any point where the cutting device (14) severs two drinking straws (4) from each other has a recess which in its height position is matched to the glue layer (8) and whose height extension (h1) corresponds at least to the width (h2) of the glue layer.

2 (Amended). A drinking straw attachment device according to claim 1, wherein the feeder device (12) is a rotor.

3 (Amended). A drinking straw attachment device according to claim 2, wherein the recesses are formed by a first peripheral groove (58) provided at the height of the glue layer (8) on the circumference of the feeder rotor (12).

4 (Amended). A drinking straw attachment device according to claim 2 or 3, wherein the cutting device comprises a knife (14) which can be moved radially to the axis of the feeder rotor (12).

5 (Amended). A drinking straw attachment device according to claim 1, 2, or 3, wherein the feeder device (12) comprises vacuum devices (54) holding the drinking straws (4) by vacuum pressure to the feeder device.

6 (Amended). A drinking straw attachment device according to claim 1, wherein two pressing devices (16a, 16b) are provided which engage in the upper and lower area of the drinking straw (4) to be pressed-on.

7 (Amended). A drinking straw attachment device as claimed in claim 6, wherein the feeder rotor (12) comprises an extension in the axial direction corresponding at least to the height of a drinking straw (4) and where at the height of the pressing devices (16a, 16b) a second and a third peripheral groove (56a, 56b) are provided.

8 (Amended). A drinking straw attachment device as claimed in claim 7, wherein a third pressing device is provided at the height of the first peripheral groove (58).

9 (Amended). A drinking straw attachment device as claimed in claim 8, wherein the pressing devices (16a, 16b) are fingers which can be pivoted around an axis (19) and which press against each of the drinking straws (4) with the end remote from the axis (18) on the corresponding beverage containers (2b).

10 (Amended). A drinking straw attachment device as claimed on claim 1, 2, or 3, wherein the drinking straws (4) are heat-sealed into a protective covering (26) forming the

drinking straw band and that the drinking straws (4) are separated from each other by a seal seam (28).

11 (Amended). A device as claimed on claim 1, wherein the glue layer comprises a transfer glue band (8) which has been applied in advance to the drinking straw band (6, 26).

12 (Amended). A drinking straw attachment device as claimed in claim 1, wherein two drinking straw attachment stations are each provided with a feeder device (12), a cutting device (14) and a corresponding number of pressing devices (16a, 16b) which alternately provide the beverage containers (2a, 2b) with drinking straws (4).

13 (Amended). Method for attaching drinking straws to beverage containers, comprising feeding the drinking straws in the form of a drinking straw band (6, 26) provided on one side with a glue layer (8) by a feeder device (12) to the beverage containers (2), severing the drinking straw band (6, 26) with a cutting device (14) in the area of the feeder device (12) between two drinking straws, piercing the cutting device (14) through the glue layer (8) and the drinking straw into a recess (58) provided on the feeder device (12) corresponding in its height position to the glue layer (8) and the height extension (h1) of which at least corresponds to the width (h2) of the glue band, and glueing the individual drinking straws onto the respective beverage containers.

REMARKS

The claims have now been reviewed and amended to conform to U.S. practice, but have not been narrowed. The specification has been given headings, and a substitute Abstract has been provided on a separate sheet. No new matter has been added.

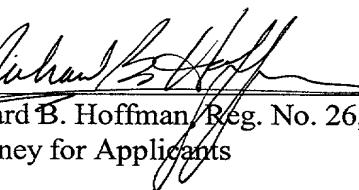
Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made".

It is respectfully submitted the application as amended above is now in condition for substantive examination on the merits. If any claim or other fees are due by this Amendment, please charge our deposit account No. 13-2855.

Respectfully submitted,

Dr. Hans-Peter Wild et al, Applicants

Date: February 28, 2002

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U.S. PATENT AND TRADEMARK OFFICE

Abstract

A drinking straw attachment device for attaching drinking straws to beverage containers, wherein the drinking straws are fed in the form of a drinking straw band provided with a glue layer, with a feeder device having, at least at the point where the cutting device severs two drinking straws from each other, a recess matched in its height position with the glue layer and the height extension of which corresponds at least to the width of the glue layer. A method for attaching drinking straws to beverage containers includes cutting the drinking straw band into pieces between each of the two drinking straws with a cutting device in the area of the feeder device, and piercing the cutting device through the glue layer and the drinking straw band into a recess provided on the feeder device in a height position corresponding to the glue layer, and whereby the height extension of the recess corresponds at least to the width of the glue band.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

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Page 4, after description of Figure 4, please add a new centered heading as follows:

--Detailed Description of the Invention--

Page 5, please delete the first full paragraph, and substitute with the following:

--Reference numeral 12 denotes a feeder rotor with recesses 24 whose shape is adapted to the drinking straws or the drinking straws in protective coverings. Number 54 shows the vacuum holes which upon application of vacuum hold the drinking straws to the feeder rotor 12. The feeder rotor 12 is equipped with two peripheral grooves 56a and 56b. A further circular groove 58 is located between the two other circular grooves at a height corresponding to glue band 8. A knife 14, movable radially in relation to the axis of the feeder rotor 12, serves to sever the drinking straw band 6. At the point where the knife 14 meets the feeder rotor 12 in severing the drinking straw band 6, a narrow vertically extending groove can be provided in the rotor for receiving the knife, this groove not being shown in Figure 1 for reasons of visual clarity.--

Page 5, please delete the second full paragraph, and substitute with the following:

--Reference numerals 16a and 16b indicate pressing devices pivotally supported around an axis 19. Arrow direction 50 indicates in which direction the individual drinking straws are moved through the pressing devices 16a and 16b. The grooves 56b and 56a between the feeder rotor 12 have been chosen in regard to their dimensions such that the feeder rotor 12 can rotate without being obstructed by the pressing devices 16a and 16b which protrude into the grooves 56b and 56a.--

IN THE CLAIMS:

Please delete "Patent claims" at top of page and insert --We Claim--.

Please amend the claims to read as follows:

1 (Amended). Drinking straw attachment device for attaching drinking straws to beverage containers, wherein the drinking straws (4) are fed in the form of a drinking straw band (6, 26) which has been provided on a first side with a glue layer (8), [and wherein] the drinking straw attachment device comprising[es the following]:

a conveyer device (10) for transporting the beverage containers (2) along a conveyor belt;

a feeder device (12) for feeding the drinking straw band (6, 26) to the conveyor belt, wherein the drinking straw band engages a second side on the feeder device (12) which has not been provided with a glue layer;

a cutting device (14) in the area of the feeder device (12) for severing the drinking straw band (6, 26) between two drinking straws (4) each; [and]

at least one pressing device (16a, 16b) for pressing a drinking straw (4) to a foil bag (2b) in such a manner that the drinking straw sticks with the glue layer (8) to the beverage container; and [where]

the feeder device (12) at least at any point where the cutting device (14) severs two drinking straws (4) from each other has a recess which in its height position is matched to the glue layer (8) and whose height extension (h1) corresponds at least to the width (h2) of the glue layer.

2 (Amended). A drinking straw attachment device according to claim 1,
[characterized in that] wherein the feeder device (12) is a rotor.

3 (Amended). A drinking straw attachment device according to claim 2,
[characterized in that] wherein the recesses are formed by a first peripheral groove (58)
provided at the height of the glue layer (8) on the circumference of the feeder rotor (12).

4 (Amended). A drinking straw attachment device according to [one of] claim[s] 2 or
3, wherein [characterized in that] the cutting device comprises a knife (14) which can be
moved radially to the axis of the feeder rotor (12).

5 (Amended). A drinking straw attachment device according to [one of] claim[s] 1, 2,
or 3, [through 4, characterized in that] wherein the feeder device (12) comprises vacuum
devices (54) holding the drinking straws (4) by vacuum pressure to the feeder device.

6 (Amended). A drinking straw attachment device according to [one of] claim[s] 1
[through 5, characterized in that], wherein two pressing devices (16a, 16b) are provided
which engage in the upper and lower area of the drinking straw (4) to be pressed-on.

7 (Amended). A drinking straw attachment device as claimed in [one of] claim[s] 2
and] 6, [characterized in that] wherein the feeder rotor (12) comprises an extension in the
axial direction corresponding at least to the height of a drinking straw (4) and where at the
height of the pressing devices (16a, 16b) a second and a third peripheral groove (56a, 56b) are
provided.

8 (Amended). A drinking straw attachment device as claimed in [one of] claim[s] 3

and] 7, wherein [characterized in that] a third pressing device is provided at the height of the first peripheral groove (58).

9 (Amended). A drinking straw attachment device as claimed in [one of the] claim[s] 1 through] 8, wherein [characterized in that] the pressing devices (16a, 16b) are fingers which can be pivoted around an axis (19) and which press against each of the drinking straws (4) with the end remote from the axis (18) on the corresponding beverage containers (2b).

10 (Amended). A drinking straw attachment device as claimed on [one of the] claim[s] 1 [through 9, characterized in that], 2, or 3, wherein the drinking straws (4) are heat-sealed into a protective covering (26) forming the drinking straw band and that the drinking straws (4) are separated from each other by a seal seam (28).

11 (Amended). A device as claimed on [one of the] claim[s] 1 [through 10 characterized in that], wherein the glue layer comprises a transfer glue band (8) which has been applied in advance to the drinking straw band (6, 26).

12 (Amended). A drinking straw attachment device as claimed in [one of the] claim[s] 1 [through 11 characterized in that], wherein two drinking straw attachment stations are each provided with a feeder device (12), a cutting device (14) and a corresponding number of pressing devices (16a, 16b) which alternately provide the beverage containers (2a, 2b) with drinking straws (4).

13 (Amended). Method for attaching drinking straws to beverage containers, comprising feeding [wherein] the drinking straws [are fed] in the form of a drinking straw band (6, 26) provided on one side with a glue layer (8) by a feeder device (12) to the beverage containers (2), [wherein] severing the drinking straw band (6, 26) [is severed] with a cutting device (14) in the area of the feeder device (12) between two drinking straws, piercing [and wherein] the cutting device (14) [pierces] through the glue layer (8) and the drinking straw

into a recess (58) provided on the feeder device (12) corresponding in its height position to the glue layer (8) and the height extension (h1) of which at least corresponds to the width (h2) of the glue band, and [subsequent to which] glueing the individual drinking straws [are glued] onto the respective beverage containers.

Abstract

[The invention relates to a] A drinking straw attachment device for attaching drinking straws to beverage containers, wherein the drinking straws are fed in the form of a drinking straw band provided with a glue layer[. The], with a feeder device [shows] having, at least at the point where the cutting device severs two drinking straws from each other, a recess matched in its height position with the glue layer and the height extension of which corresponds at least to the width of the glue layer. [The invention relates further to a] A method for attaching drinking straws to beverage containers[, wherein] includes cutting the drinking straw band [is cut] into pieces between each of the two drinking straws with a cutting device in the area of the feeder device, and [where] piercing the cutting device [pierces] through the glue layer and the drinking straw band into a recess provided on the feeder device in a height position corresponding to the glue layer, and whereby the height extension of the recess corresponds at least to the width of the glue band.